APPARATUS FOR DETERMINING THE PERCENTAGE OF A FLUID IN A MIXTURE OF FLUIDS DIVISIONAL OF SERIAL NO. 311,610

IN THE CLAIMS:

Cancel in this application all original claims of the prior application, except claim 13. Claim 13 as previously amended follows:

1/3. A comparator circuit for use in determining phase conditions of fluids where there is a pronounced step jump or discontinuity joining two independent families of curves such as in the electrical properties of an oil/water mixture or the flow characteristics of a fluid, said compartor circuit receiving data from a plurality of probes such as an oil/water monitor or a turbine flow meter comprising:

(a) a first memory for storing a first data curve representing a first set of phase characteristics;

(b) a second memory for storing a second data curve representing a second set of phase characteristics;

(c) a computer means for receiving the data from the probe, said computer means comparing the data received to a predetermined value thereby allowing said computer means to select said first memory if the data received from one probe is less than the predetermined value or to select said second memory if the data received from the probe is greater than the predetermined value, and

 $\binom{j}{l}$ (d) a computer means to affect a secondary correction to the first probe measurement.

2

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